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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/693,015

10/24/2003

William C. Phillips

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SHUMAKER & SIEFFERT, P. A.

1625 RADIO DRIVE

SUITE 300

WOODBURY, MN 55125

EXAMINER

HELLER, TAMMIE K

ART UNIT

PAPER NUMBER

3766

NOTIFICATION DATE

DELIVERY MODE

06/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pairedocketing@ssiplaw.com

Office Action Summary	Application No. 10/693,015	Applicant(s) PHILLIPS ET AL.	
	Examiner TAMMIE HELLER	Art Unit 3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,11-13,15-20 and 22-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,11-13,15-20 and 22-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the appeal brief filed on March 25, 2008, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 39 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3766

4. The term "substantially" in claims 39 and 40 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear from the claims and specification as to what constitutes a substantially closed loop or what would make an aperture substantially central.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 5, 19, 20, 23, 33, 39, and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Kemper et al. (U.S. 2003/0222755), herein Kemper. Regarding claims 1, 17, 19, 33, 39, and 40, Kemper discloses a remote control transmitter which includes an internal antenna 11 which defines an aperture, and a battery bay 3 that extends at least partially into the aperture (see Figure 1A and paragraph 35). Because the invention of Kemper is a remote control transmitter, it is capable of transmitting information, such as programmable instructions.

7. Regarding claims 2 and 20, a load is presented to an antenna when batteries are placed within its magnetic field. The Examiner takes the position that it can be seen from Figures 1-3 that the battery 3 is located within the magnetic field of the antenna 11. Therefore, the placement of the batteries in Kemper places a load on the internal antenna.

8. Regarding claims 5 and 23, Kemper discloses that the transmitter may be encapsulated in first and second housing members, include a radio frequency transmitting circuit board, and a printed circuit board (see paragraph 10).

9. Claims 1, 2, 17, 19, 20, 33, 39, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Taylor et al. (U.S. Patent No. 4,899,039), herein Taylor. Regarding claims 1, 17, 19, 33, 39, and 40, Taylor discloses an apparatus which includes an internal antenna 14 mounted on the housing which defines an aperture, and a battery bay 13 which extends at least partially into the aperture (see Figures 1 and 2 and col. 2, ln. 29-44).

10. Regarding claims 2 and 20, a load is presented to an antenna when batteries are placed within its magnetic field. The Examiner takes the position that it can be seen from Figures 1 and 2 that the battery 13 is located within the magnetic field of the antenna 14. Therefore, the placement of the batteries in Taylor places a load on the internal antenna.

11. Claims 1, 2, 17, 19, 20, 33, 39, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Tuttle et al. (U.S. Patent No. 5,963,177), herein Tuttle. Regarding

Art Unit: 3766

claims 1, 17, 19, 33, 39, and 40, Tuttle discloses a radio frequency receiving/transmitting device that includes an internal antenna 32 which defines an aperture, and a battery 52 which extends at least partially into the aperture (see Figure 1).

12. Regarding claims 2 and 20, a load is presented to an antenna when batteries are placed within its magnetic field. The Examiner takes the position that it can be seen from Figure 1 that the battery 52 is located within the magnetic field of the antenna 32. Therefore, the placement of the batteries in Tuttle places a load on the internal antenna.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 2, 4-9, 11, 13, 15-20, 22-28, and 30-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanton in view of Maeda. Regarding claims 1, 17, 19, 33, 35-37, 39, and 40, Stanton discloses a patient programmer that includes an internal antenna 56 mounted within the housing and a battery bay indicated generally by battery cover 14 (see Figures 1 and 6). However, Stanton fails to disclose that the internal antenna defines an aperture and that the battery bay extends into the programmer in substantial alignment with the aperture. Maeda discloses a telemetric communication device that includes a substantially closed loop antenna 2 that defines a

substantially central aperture and a battery 1 that is positioned such that it is in substantial alignment with the aperture (see Figure 3). Maeda discloses that this configuration of the battery and antenna is utilized in order to facilitate a more isotropic configuration of the telemetric energy (see paragraph 33). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to configure the programmer of Stanton such that the internal antenna defines an aperture and the battery bay extends into the programmer in substantial alignment with the aperture, as taught by Maeda, in order to facilitate a more isotropic configuration of the telemetric energy. Further, it would have been obvious to one having ordinary skill in the art to try the finite number of different configurations of antenna and battery described and illustrated by Maeda in order to ascertain the optimum characteristics for the device.

15. Regarding claims 2 and 20, a load is presented to an antenna when batteries are placed within its magnetic field. This load enhances noise immunity of the internal antenna to external electromagnetic interference. From Figure 3 of Maeda it is observed that the batteries are located within the magnetic field of the antenna and therefore present a load to the antenna. Therefore, the placement of the batteries in Maeda inherently places a load on the internal antenna in order to enhance noise immunity to external electromagnetic interference.

16. Regarding claims 4 and 22, Stanton discloses that a 9-volt battery may be housed within the battery compartment (see col. 7, ln. 23). Therefore, the battery bay is sized to accommodate AAA batteries.

17. Regarding claims 5 and 23, Stanton discloses a first circuit board 50 and a second circuit 52 that are disposed within housing 10 (see Figures 1 and 6). It can be seen from Figure 1 that housing 10 includes first and second housing members. Although Stanton fails to describe circuit 52 as disposed on a circuit board, the Examiner takes the position that it is well known in the art to dispose circuits of different configurations on circuit boards, as can be seen from the specification of Stanton relating to integrated circuit 50 disposed on a circuit board. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to dispose the circuit 52 of Stanton on a circuit board in order to facilitate the ease with which the circuit may be connected to other electrical components, such is the case with circuit board 50. Further, it is inherent that when the device of Stanton is constructed, the first and second circuit boards will be disposed within the first and second housing members.

18. Regarding claims 6 and 24, Stanton discloses that the housing includes a battery compartment cover 14 that acts as an access opening for placement of batteries (see col. 5, ln. 55).

19. Regarding claims 7 and 25, it can be seen from Figures 6 and 7 of Stanton that the internal antenna may be displaced from the circuit board and coupled via a connector.

20. Regarding claims 8, 9, 26, and 27, Stanton discloses that the internal antenna may be mounted on a circuit board 52 controlling telemetric operations while a display 32 may be disposed on a separate circuit board 50 (see Figure 7 and col. 8, ln. 23-33).

The Examiner takes the position that the LEDs disclosed by Stanton may be considered a display, as they are capable of displaying and indicating the status of the device.

21. Regarding claims 11, 18, 28, and 34, Stanton discloses that the programmer may be used with an implantable neurostimulator (see col. 1, ln. 27-32).

22. Regarding claims 13 and 30, Stanton discloses that an external antenna 28 may be coupled to the programmer via a cable (see Figure 1).

23. Regarding claims 15 and 31, examiner takes Official Notice that it is well known in the antenna art to construct an internal antenna from a plastic frame wound with conductive winding in order to enhance the noise immunity of the antenna. The conductive winding is wound such that the direction of the helix determines the type of signal (either right or left-handed) the antenna is able to receive. The antenna consequently only receives the signals for which it is designed and noise from other sources is eliminated. Therefore, it would have been obvious to one of ordinary skill in the antenna art to construct the antenna of Stanton from a plastic frame wound with conductive winding in order to further increase the noise immunity of the antenna. Applicant's attention is directed to U.S. Patent No. 3,683,389 to Hollis, Figure 1, where the coil/loop antennas 32 and 36 are wound on dielectric frame 28.

24. Regarding claims 16 and 32, examiner takes Official Notice that it is well known in the antenna art to use copper-braiding as a shielding mechanism for antennas to shield the electromagnetic field of the antenna and reduce electrical and electromagnetic interference caused by the antenna. Therefore, it would have been obvious to one of ordinary skill in the art to shield the antenna of Stanton using copper

braiding in order to reduce electrical and electromagnetic interference and reduce antenna loading during transmission and reception. Applicant's attention is directed to U.S. Patent No. 2,203,517 to Beggs where shield 28 surrounds the loop antenna 3 wound on dielectric frame 27.

25. Regarding claim 38, the Examiner takes the position that buttons 19-22 of Stanton may act as a telemetry interface (see Figures 6 and 7 and col. 13, ln. 4-5).

26. Claims 12 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanton in view of Maeda as applied to claims 1, 2, 4-9, 11, 13, 15-20, 22-28, and 30-40 above, and further in view of Mann et al. (U.S. 2002/0107476). Stanton in view of Maeda discloses the invention essentially as claimed, but fails to disclose that the display is a liquid crystal display. Mann discloses a patient programmer including a display 150 (see Figure 2). Further, Mann discloses that it is well known to use either LEDs or LCD as display devices (see paragraph 53). Therefore, it would have been obvious to one having ordinary skill in the art to substitute the LEDs of Stanton for an LCD, as taught by Mann, as simple substitute of one known element for another to obtain predictable results is obvious to one having ordinary skill in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMMIE HELLER whose telephone number is (571)272-1986. The examiner can normally be reached on Monday through Friday from 7am until 3:30 pm.

Art Unit: 3766

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl H. Layno can be reached on 571-272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tammie Heller/
Examiner, Art Unit 3766

/Carl H. Layno/
Supervisory Patent Examiner, Art Unit 3766